Title: SOME SCIENTIFIC PROBLEMS OF ASTRONOMICO-GEODESY IN CONNECTION WITH THE STUDY OF THE EARTH'S HARD SHELL: AUTHOR'S ABSTRACT

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(Note: The following is the author's abstract of his article that appeared in a symposium, Trudy Institute Teoreticheskoy Geofiziki (Works of the Institute of Theoretical Geophysics), Volume II (1947), published in Moscow by the Academy of Sciences USSR Press and edited by O. Yu. Schmidt. This article represents a lecture delivered before the Institute in May 1944.

Also given below are the titles and authors of the four other articles appearing in this symposium.)

The contemporary status of the problem of studying the structure of the earth's crust by methods of astronomics-geodesy and gravimetry using the data of geophysics and geology is discussed. After a brief review of the results of studies on isostasy by Pratt (India) and Hayford (USA), the contemporary works of Vening Meynets, Glennie, and Magnitskiy (USSR) are investigated. It is shown that Magnitskiy has devised a new improved method for detecting large waves of the geoid and the so-called structural anomalies of gravitational force. Magnitskiy's method permits a more confident study of deep folds and thus of the geological structure of the upper layers of the earth's crust. It also permits a more reliable derivation of the parameters of the terrestrial ellipsoid. According to the author, the Magnitskiy method will make possible a study of the structure of the Russian platform which will be more successful than the study made by Glennie in India. In conclusion, general

considerations are given on means for the joint utilization of international data on astronomico-geodesy and gravimetry together with geophysical and geological data, in the study of the figure of the geoid, and the structure and deformations of the earth's crust.

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